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PREHISTORIC HUNTERS OF NEWFOUNDLAND-LABRADOR AND THEIR RELATIONSHIP TO NEW ENGLAND ARCHAEOLOGY

By

Elmer Harp, Jr.

In the prehistoric period the northeastern sector of the North American continent was one of the world's marginal culture areas. Most of the fundamental traits which characterized the early hunters here had been carried in by diffusions of eastward-moving peoples whose ultimate ancestral home was once Eurasia. The land was cold, lonely, and inhospitable, and subsequent local development of culture was relatively weak. Here in this fringe region we find the archaeological end-products of at least two of the ancient movements which stocked the New World with mankind. These, broadly speaking, were the northern Indians, who dwelt largely in the coniferous forests, and the Eskimos, who occupied the barren regions still farther north. From the standpoint of culture history, the two circumpolar geographical zones which these people inhabited, the forest and the tundra, are virtually inseparable: although they afford radically different environments to man, the variant cultures which grew within them have many cross ties and interrelationships. This fact makes it at once more fascinating and more difficult to reconstruct their ancient past.

Ever since 1881, American archaeologists have recognized that the northeastern area, even as far south as Maryland, contained in its prehistoric time levels certain strange and anomalous culture traits, of which perhaps the most curious was a tool and weapon industry utilizing ground and polished slate. Generally this was attributed to Eskimo influence, but inasmuch as most scholars were unwilling to admit that Eskimos had ever penetrated that far south, it was predicated that the northeast had once been an arena of contact in which both Indian and Eskimo peoples had met and exchanged ideas. More recently this field of potential diffusion was narrowed to Newfoundland, and now we shall see what sort of evidence may be contained in this island *cul de sac.*

If we take all elements into account, Newfoundland has quite an amazing archaeological complexity. For many years it was believed to have been occupied in prehistoric times by only a single group of people, the Beothuk Indians, but now we know that other primitive groups also left their mark there, and since some of these influences came primarily within the historic period, it seems best to begin our analysis there.

Numerous reports reveal that Micmac Indians from Nova Scotia had crossed over to Newfoundland and, at least by the nineteenth century, had penetrated to White Bay and other portions of the north coast. Yet their influx did not become a sizeable movement until after the French had begun permanently to colonize Nova Scotia and Cape Breton Island in 1604. Tradition has it that the Micmacs and Beothuks were in friendly contact during the first part of the seventeenth century on the southwestern shores of Newfoundland. Sometime afterward, however, the Micmacs acquired guns, subsequently became enemies of the Beothuks, and finally won complete ascendancy over them. Nevertheless, in the face of evidence which suggests that an occasional Micmac canoe may have reached Newfoundland in the pre-Colonial period, I do not believe that these Indians moved there in substantial numbers until after they had known the Europeans and had obtained from them the use of sailing vessels, firearms, and metal tools. Thus, they had already passed beyond the level of a stone age culture by the time they became an important factor in the occupation sequence of the island.

The case of the Montagnais Indians of Labrador is similar. Their point of entry into Newfoundland was at the Strait of Belle Isle which, although it frequently presents many hazards to navigation, can be a relatively simple passage. At its narrowest convergence the Strait is but nine miles wide, and on the winter ice this is sometimes even passable on foot. In fact, this area must have been the bridgehead for all the prehistoric movements into Newfoundland, if we may discount the importance of the Micmacs at that stage.

Documentary evidence shows that the Montagnais hunted in Newfoundland in the historic period. For instance, William Cormack, who made a famous exploratory journey across the island in 1822, came upon the camp of a Montagnais hunter and his woman deep in the interior. However, our knowledge of migrational shifts in the northeast suggests that the Montagnais Indians did not spread into the Labrador peninsula before the seventeenth century. Moving eastward along the north shore of the Gulf of St. Lawrence, they were in constant conflict with groups of Eskimos who then inhabited that entire littoral through the Strait

of Belle Isle and on northward down the Labrador. Gradually these Eskimos were driven back by the combined forces of the French and Montagnais: their ranks were decimated in a struggle at Esquimaux Point, on the Quebec shore, about 1650, and again at Battle Harbour, north of Belle Isle, about 1750. Presumably, then, the Montagnais, as a discrete aboriginal group, could not have had access to Newfoundland until after they had had lengthy association with European culture. I am convinced that they, too, had advanced beyond a stone age level of technology, and, like the Micmacs, were a negligible factor in prehistoric Newfoundland.

This brings us to one of the crucial early peoples of the island, the Beothuks. They were the principal inhabitants when the first Europeans came there in the fifteenth century, but by 1825 they had been forced to the brink of extinction by the shameful depredations of the whites. In that year there were but fourteen known survivors of the once probably populous tribe, and not long afterward these too were gone. No one knows if they starved to death, or whether, according to one tradition, their remnants fled northward and escaped across the Strait of Belle Isle to Labrador.

Our meager knowledge of these annihilated people suggests that they were the last residue in the northeast of a very old culture stratum, and, more specifically, the few trustworthy reports left by the early settlers lead us to believe that Beothuk subsistence economy was essentially like that of the Algonkian-speaking tribes. They were, first of all, semi-nomadic in their existence, shifting between a summer life on streams, lakes, and the sea coast, and a winter round of hunting in the interior forests, their diet being predominantly animal food, supplemented by fish and wild edibles of a vegetable nature. In winter the snowshoe was an indispensable aid to their travel in the soft, unpacked snow of the forest, while summer transportation depended on the canoe. Birchbark was a chief material used in making these canoes, as well as conical tepees and wigwams, dishes, and other containers, whereas clothing, of which moccasins and leggings were typical items, was made of animal skins. And wood, as might be expected, was the major fuel for cooking and heating. Of their social system we know nothing, but it is probably safe to say that the Beothuks had one similar to those of better-known groups of the northern forests. These, in general, comprised a loosely structured social, religious, and ceremonial life. The primitives of this zone also lacked politically powerful leaders, and tended rather to a form of patriarchal control in their family hunting territories, which are known to have been an important institution, at least in the farther northeast.

In addition to such likenesses in the material way of life, one might then presume that the Beothuk tongue was related to the greater Algonkian linguistic stock, which at one time was transcontinental in scope. However, although some 500 of their words have come down to our day, scholars have not been able to demonstrate any affinities between the two, and this negative form of evidence would suggest that an enclave of Beothuk culture in Newfoundland could well have been a survival of pre-Algonkian times. This hypothesis is further borne out by what archaeological facts we have concerning these people. From such data we can affirm that their material culture and technology were indeed similar to those of other natives in the northern boreal forests. In a larger sense, too, they shared certain elements of the basic subsistence complex which characterized the entire environmental zone, sometimes called by its Russian name *taiga,* which stretches virtually unbroken through subarctic latitudes from Newfoundland across Canada and Siberia to the Scandinavian peninsula.

This *taiga* subsistence economy was an expression of deep and long-lasting conservatism which apparently persisted over a span of several thousands of years. It seems that once primitive man had attained an adequate ecological balance *vis a vis* this particular environment, he continued to use much the same techniques for living wherever he moved through the northern forest zone. We do not yet know just where the fundamental complex originated, but quite certainly this occurred somewhere in the Old World, whence it gradually diffused to North America, and the archaeological residue, by means of which it can be traced, maintains throughout time and space a noteworthy degree of uniformity. Of course, we possess only those few types of imperishable artifacts which have withstood the rigors of extreme ageing processes, but even these point strongly to a widespread unity of purpose which has been demonstrated to fit the forest life that I have briefly described for the Beothuks. Such traits include, for example, the humped-back gouge and the rectangular adze,

chipped stone crescentic knives, certain forms of bone implements such as harpoon heads, and the ground and polished slate industry, of which the most usual forms were the finely made double-edged knives and lance points, and, again, crescent-shaped knives.

This very same array is also found as a distinctive entity at an early level of the so-called Archaic period here in the northeast. At least in New York state we know that it had considerable antiquity: it has been dated there, by means of radioactive Carbon-14, and found to have existed throughout a period of some 2,000 years, between 3,000 and 1,000 B.C. Furthermore, I believe it can be shown that representative traits of this complex are known from several other locales in the remoted northeast, specifically from Tadoussac on the northern Quebec shore of the St. Lawrence River; in the area of Forteau Bay and Pinware River, on the Labrador coast of the Strait of Belle Isle; and also from the area of Hopedale in northern Labrador. These three foci, in turn, encompass the most logical area of derivation for the very same complex which can now also be recognized as a part of the archaeology of Newfoundland.

At least some of these identical culture traits can be attributed to the Beothuks, although one cannot rightfully attach their name to the local occurrence of the entire complex, for we must realize that as a group they probably had no comparable antiquity. We know for certain only that they were a tribe of the early Colonial era, and it is apparent that as we pass backward on the time scale the term "Beothuk" must become a mere fiction. It is better, I think, to consider this archaic manifestation in Newfoundland as a "pre-Beothuk" occupation, and thus pay some deference to evidence which clearly suggests that a generic relationship did exist between the latterday Beothuks and the archaic cultural continuum of the northeastern region.

At this point we come to the second of the crucial early peoples who at one time lived in Newfoundland, the Eskimos. They can be dismissed with greater brevity, however, for it now appears quite certain that their influx came relatively late and was of little consequence as far as northeastern Indian culture was concerned. The most recent of these were the Eskimos who inhabited the Strait of Belle Isle area during the Colonial period. They were essentially modern derivatives of Eskimo culture in northern Labrador and Baffin Island, and, as far as I am aware, they made no contributions whatsoever to the Beothuk Indians. Indeed, early references describe how a state of bloody enmity existed between these two groups.

Some 500 years before that, however, around 1,000 A.D., there was another representation of Arctic cuture in northwestern Newfoundland. This was the southernmost known offshoot of the Cape Dorset Eskimos whose antecedant culture seems to have crystallized in the general area of northern Hudson Bay. At present, this manifestation is accorded the distinction of having been the oldest known Eskimo culture in the eastern Arctic, but the story of its derivation and of its relationships with the later, classic whale-hunters of the north lies beyond our present scope. It must suffice to say, that Dorset culture was distinguished by a seemingly greater dependence upon the land and also by its lack of many of the specialized traits of the modern Eskimos. In other words, it appears to have lain closer to the earlier, incipient stages of Eskimo culture, which, in its very beginning, must have stemmed from an ancient inland hunting complex.

This archaic aspect of Dorset culture, coupled with its occurrece in Newfoundland, gave rise to the supposition that here was the carrier which had been responsible for the transmission of Eskimo-like traits to the Indians of northeastern North America. However, two different types of evidence now invalidate this theory. Of these, I have already mentioned radiocarbon dating of portions of the Archaic complex in New York state, and even though we should probably allow a time lag for the penetration of this complex into Labrador and Newfoundland, we can almost certainly place its arrival there in the pre-Christian era. On the other hand, for the benefit of those who still regard radiocarbon dating with a degree of skepticism, recent archaeological analysis has indicated that in fact there was very little cultural transference between the Dorset Eskimos and the Beothuk Indians in Newfoundland, although there may have been actual contact between these two peoples. Furthermore, and again on archaeological grounds, whatever slight diffusion did occur, must have taken place well within the Christian era, and come at a time when both of these aboriginal groups were approaching a final isolation in Newfoundland. Evidently, then, we must seek elsewhere for the source of the likenesses which ostensibly linked Indian and Eskimo culture, and it seems now, in the light of our present knowledge, that this quest

will lead ultimately to some ancestral horizon in the Old World whence the cultures of both the *taiga* and *tundra* evolved.

And so, we see that the Newfoundland-Labrador area probably never exerted a profound effect on prehistoric cultural developments in New England. Although it shared in at least some of the early and ancient culture horizons which were widespread in the northeast, it became the *ne plus ultra* in this already marginal region. Whereas progress continued to be made elsewhere on the continental shores, Newfoundland, as time went by, became the localized hunting ground of two cultural holdovers. Each was the terminal expression of a diffusion, one Indian and the other Eskimo, which appears to have been cut off at last by the pressure of incoming peoples and cultures from the west. So far as we can tell, their influence was never again felt beyond the confines of this island outpost. Yet, whether or no their demise came after a period of stagnation, we must not fail to credit their role in the slow, halting conquest of the northern regions, for this was one of the great sagas of human endeavor.

ETHNOLOGY OF NORTHERN NEW ENGLAND AND THE MARITIME PROVINCES

By

ERNEST S. DODGE

The study of ethnology in northern New England and the Maritime Provinces had reached the end of an era. It seems the appropriate time to summarize and evaluate the major aspects of that study. By doing so certain obvious gaps in our knowledge should become apparent. And while, in all probability, some of those gaps will never be filled, others should present desirable projects that could be undertaken with the reasonable assurance of fruitful conclusions.

Ofttimes in academic fields as in the other affairs of men there comes a natural pause or break —the end of a chapter. A line is drawn. This commonly happens in obscure fields off the main highways of scholarly endeavor; particularly if the field has been long dominated by a small group of people or one personality. Such is not usually the case in a big field where men and generations overlap and ripple along like the waters of a well flowing river. The ethnology of the northeast, at least that subdivision of the northeast that we are presently concerned with, is a relatively small field that has attracted the main interest of but few scholars. Others have cast it an occasional glance. A smiliar break occurred in the archaeology of the same region a little over a decade ago with the deaths of Moorehead and Willoughby. For the ethnology the end of the chapter came in 1950 with the death early that year of Frank G. Speck. For over forty-five years he had devoted himself to this region as one of his particular enthusiasms and his name was almost synonymous with it. But besides the end of Speck's career the half dozen other people actively interested in the subject all died at nearly the same time or a few years previously. One gets used to hearing certain spokesmen for particular studies and when they all lay down their pens together the ensuing silence thunders.

Let us briefly review the tribes concerned in their historic homelands, and devote a few minutes to our ethnological knowledge of each. From east to west the principal tribal groups involved are the Micmac, Malecite, Passamaquoddy, Penobscot, Abnaki, and Pennacook. All of these, with the possible exception of the last, can be conveniently grouped under the name Wabanaki—the Easterners. Culturally and linguistically these tribes have many common attributes though their differences in details are numerous and marked.

We will not now go into those details of difference but merely point out some of the great generalities which these tribes share in common and which give them a certain identity and unity distinguishable from their immediate neighbors. While lines can be drawn on a map delineating the geographical boundaries between the tribes in a neat European way it probably bears but little or no more than a superficial resemblance to reality. The main centers of population were along the large river valleys and at certain desirable coastal points. Much of the population was seasonally migratory, moving to the coast at the beginning of the black

fly season for the summer months and returning to the forest in cold weather.

Basically the culture was one of simplicity in all its aspects. Primarily a limited nomadic northern hunting and fishing culture with some agriculture at its southwestern extremity, it was distinguished by weak authority of political chiefs, an unstratified society, and an informal and individualistic religion. Certain other basic and important material things were also shared with their closely related Algonquian neighbors to the north and west. The conical bark or skin wigwam, bark canoe, toboggan, snowshoes, birch bark containers, and certain types of traps are common to the whole Algonquian hunting complex. So too, do the Wabanaki share with their brethren a social structure based, without exception, on family groups made up of blood marriage relatives who hunt together within the confines of certain paternally inherited territory. Speck devoted years of effort to working out the hunting territories of many of the northeastern tribes.

But besides the many cultural features which link the Wabanaki with other closely related northeastern Algonquian groups there are certain other aspects which distinguish them. Linguistically they are all very closely related, with the Micmac being most divergent. As a matter of fact the entire tier of Algonquian tribes south of the St. Lawrence from the Mahican, adjacent to the Iroquois country in New York, to the Micmac form a series of tribes centered on the large river valleys each varying only slightly from its neighbors. But these slight differences are accumulative so that the contrast between the tribes at the geographical extremities is rather marked. In other words one of the fascinations and at the same time one of the difficulties of studying these eastern Algonquian tribes is its resemblance to peeling an onion. No sooner is one layer removed than there is another so similar and obviously related that one must continue. While retaining their basic northern hunting culture the Wabanaki tribes have all been influenced by the Iroquois. This is particularly marked in such things as attempts at agriculture, the use of splint basketry, ceremonial uses of wampum; and, in historical times, an imitation of the Iroquois political confederacy.

It is well to point out here that our ethnological studies have been dictated to a great extent by historical circumstances. The tribes of the area run the entire gamut from survival in approximately the same numbers as at the time of discovery in the case of the Micmac, to complete tribal extinction in the case of the Pennacook. Between these extremes we have the Malecite and Passamaquoddy somewhat reduced in numbers and the still more reduced Penobscot continuing to inhabit their ancient territories; while the remnants of the Abnakis and their other close relatives of western Maine and New Hampshire live outside their traditional homeland. This gradation from extinction to survival corresponds almost exactly with the amount of participation of each tribe in the French and Indian Wars, and the proximity of their territory to the central area of conflict.

The Pennacooks, whose population is estimated at 2000 in 1600, went the way of their close relatives and neighbors of southern New England. Only their name survives. They were in early contact with the English colonies of eastern Massachusetts. Living as they did on the Merrimac and the headwaters of the Connecticut rivers they were squeezed amid the constant raiding and warring French, Abnaki, English, and Iroquois. Disintegration of their culture began early, and shortly after 1676 their remnants, decimated by disease and dispersed by Indian wars, joined the Abnaki at St. Francis or the Scatacook group in New York. All that is known of them occurs in early historical works and documentary sources; even these are not really as good contemporary accounts as exist for most of the other tribes. In 1940 Johnson summarized much of what is known about them. As the Pennacook were closely related to both the Indians of Massachusetts and western Maine it is not surprising that they were intermediate between them culturally and linguistically, as well as geographically. For instance they used both birch bark and dugout canoes, agriculture was more advanced, and their villages were more stable than among the Wabanaki.

For nearly a century English colonization in Maine was held up by the effective barrier presented by the Abnaki on the eastern frontier. The Wabanaki Confederacy, modeled on the Iroquois League and dominated by the French who had early converted the tribes to Catholicism, was "the rampart of Canada." The Abnaki of the Kennebec, with the closely associated, and finally absorbed, Sokoki of the Saco, Aroosaguntacook on the Androscoggin, and Wawenock of the bays, bore the brunt of the eastern French and Indian wars. They, with some Canadian Indians, figured most largely in the

raiding on English settlements, and in return were the object of most of the English raids. They were finally defeated at Norridgewock in 1724 and, greatly reduced in numbers by military disasters, withdrew to Canada where they settled at Becancour and St. Francis. Because of the prominence they played in the wars their history, since the seventeenth century, is well known. Descriptions of their culture by various Jesuits, the Dictionary of Father Rasles, their mission priest, and the accounts of John Josselyn are all helpful. A few scattered papers have been published by ethnologists, since the turn of the century, on various aspects of St. Francis culture. But there is much about the Abnaki that is not known. As a single example, if they ever shared the culture hero Gluscabe, with the other Wabanaki tribes, all knowledge of it has been forgotten.

With the Penobscot, in the next great river valley to the eastward, we come to a group about which more is known ethnologically but somewhat less, at least in certain respects, historically than with the Abnaki. Champlain met members of the tribe in 1605 and wrote of them. The same year Waymouth encountered Indians, probably either Penobscot or closely related Wawenock, and Rosier has left us a good account. Penobscot activities during hostilities between the English and French, in which they were powerful allies of the latter, are less well recorded than those of their Kennebec kinsmen. Their raids on the Massachusetts seaboard were feared by both whites and Indians who know them as Tarratines, but these raids ceased well before 1749 when they made peace with the English. There is a gap of about fifty years in the late eighteenth and early nineteenth centuries when little is known about the tribe. However, they are best known as the group on which the late Dr. Frank G. Speck did his most intense early work. From 1907 through 1918 Speck's field work was almost constantly devoted to the Penobscot, although the results of that work were generally not published until much later. In his book *Penobscot Man* and in nearly a score of papers devoted to special topics of Penobscot culture we have the most complete ethnological studies available for any of the Wabanaki tribes. It is fortunate that Speck did this research during that early most fruitful objective period of his life, rather than in his later years when, beset by illnesses and other troubles, his work became more and more colored with a genuine but beclouding sentimentality for the plight of the redman. Supplementing Speck's work, and often acting as a foil to it, are the lively and learned writings of Mrs Fannie Hardy Eckstrom. Recently I was told that the Penobscot linguistic studies to which Dr. Frank T. Seibert has devoted many years, are ready for publication. This is a study that has been long awaited.

The valley of the St. John River is the territory of the Malecite, and around Passamaquoddy Bay and along the St. Croix River live the very closely related Passamaquoddy Indians. These tribes, known historically as Etchemins, although this term was also sometimes applied to other groups, can be conveniently lumped if only for the reason that there are no good studies of either of them. They are best known in their mythology from the writings of Leland and Mechling, and linguistically through the work of Prince. Even the scanty writings of explorers, missionaries, and travelers have even less to say about these Indians than others. One man knew the Malecite uncommonly well. He was the late E. Tappan Adney whose voluminous manuscripts are now in the Peabody Museum at Salem. I believe that a presentable ethnography of the Malecites could be put together from his writings, but it would be a long and arduous process, for the prose peculiar to that eccentric but intelligent individual is of a sort that tries one's patience sorely.

The easternmost of our Indian tribes, the one inhabiting the widest territory, and the first to be seen by white men were the Micmac, whom the French called Souriquois. In spite of their dubious distinction of being the earliest North American Indian group to encounter Europeans, they have suffered no permanent or drastic decline in their numbers and continue to occupy, in part at least, the same territory in which they were found. Their domains include all of Nova Scotia and Prince Edward Island, the eastern half of New Brunswick, the Gaspe region of Quebec, and in recent historical times the western and southern parts of Newfoundland. Mooney estimated the Micmac population at 3500 in 1600, and in the Canadian census of 1944 there were 4774. For the seventeenth century the Micmac are by far the best documented tribe. A series of travellers, traders, and priests have left us descriptions which, while incomplete, give us a good picture of the Micmac at that important period. Lescarbot in 1606, Biard in 1611-13, Richard

(1645-60) Denys for forty years, publishing in 1672; and Le Clerq in 1691, present an almost continuous if fragmentary and widely scattered account of the tribe. But following these literary minded Frenchmen there is little indeed in the literature for over a century and a half. In 1846 the Rev. Silas Tertius Rand began his association with the Micmac which were to last for over forty years, and we are indebted to him for his important dictionary and book of legends. Unfortunately most of the results of this devoted man's labors went for naught for his unpublished manuscripts were all destroyed in the Wellesley College fire. Another equally devoted clergyman who gave much of his life to this tribe was the Rev. Father Pacifique of Restigouche and to him we are indebted for much of our linguistic knowledge. Speck, Parsons, and others have made contributions since 1900 but we await the studies of Wilson D. Wallis based on field work done in 1911 and 12. His book, now in press, will be comparable to Speck's work on the Penobscot.

It is obvious that little can be accomplished towards gathering remnants of the old culture from the westerly tribes. But to the eastward such work may be rewarding, particulary if it is done soon. The most pressing need is a complete ethnological study of the Passamaquoddy. It is particularly important because our limited knowledge of the tribe indicates that a more maritime culture flourished there than elsewhere in the area. Perhaps an intensive study of Passamaquoddy would reveal the beginnings of a true maritime culture or the survival of one formerly more widespread, which might tie in with some of the maritime features of recent archaeological work.

There is probably still time for some ethnological field work among the Malecite, which could be supplemented by the existing Adney material. A more intensive study of the Micmac may reveal some interesting and substantial ancient differences between various groups of that tribe residing in the several parts of their extensive territory. The extent of Iroquois influence on the entire area badly needs a definitive study. It has been logically assumed that this influence is greatest in the west, decreasing progressively eastward. This may be true for most aspects of influence, but in some (wampum uses and decorative arts for example) there is more than a little evidence that Micmac is closer to Iroquois than any of the other Wabanaki tribes.

This brings us squarely to the most important point for future research on the area. The studies of living Indians have been approached from two directions. The historian, primarily interested in European history and its American extension has studied the wars, treaties, and trade negotiations as they appear in documentary sources. But the historian's ignorance of aboriginal culture and thought processes handicaps his interpretations, if any, of other material and clues which may appear in the same documents. On the other hand the field ethnologist collecting his data from living informants soon finds himself face to a wall of darkness into which he can probe but weakly and for short distance. More intensive research in libraries and archives is needed for all the Wabanaki tribes, particularly, information that will fill in the hiatus between the seventeenth century and recent ethnological work.

In a recent trenchant paper entitled "The Training of Historical Ethnologists in America," Fenton has discussed the importance of teaching modern historical techniques as formal part of future ethnologists schooling. Training of this type is especially important for ethnologists planning to work in the region under discussion. Because the Wabanaki are one of the surviving Indian groups that have been in contact with whites for the longest time, there are vast documentary resources relating to them that have never been explored. Few ethnologists have delved into files of newspapers, unpublished government documents, church records, and family manuscript collections that are available. A couple of years ago, while searching for something else, I found a most illuminating lot of letters relating to an abortive attempt to establish a Protestant mission among the Penobscot in the 1820s, in the papers of the American Board for Foreign Missions. So then, my final observation is that a determined and systematic research program in ethno-history for the Wabanaki will produce far greater results than can possibly be obtained by a straight ethnological approach.

SOME USES OF BIRCH BARK IN NORTHERN NEW ENGLAND

By

Eva L. Butler and Wendell S. Hadlock

The white birch (Betula papyrifera) grows throughout Maine, New Hampshire, Vermont and adjacent Canada and westward along the Great Lakes in abundance. White birch also grows, but less prolifically as far south as Long Island and north even to Alaska. Wherever it grew in sufficient quantity, in early historic times, white birch seems to have been the predominent raw material used in the production of wigwam coverings, domestic equipment and canoes; but, by trade, the use and influence of the white birch extended well beyond its ecological limits.

The white birch forest was the super-market of the Indians of northern New England. They depended on it for raw materials to make articles essential to daily living from cradle to grave. The shapes into which white birch could be formed, and the list of articles which could be and were made of it is unbelieveably long. We find early references to its use for baskets, beds, bedding, biers, blankets, bowls, boxes, buckets, canoes, canopies, chimney flaps, clothing, cooking utensils, cradles, cups, dippers, dishes, doors, drums, fans, flares, games, house coverings, kettles, kindling and firewood, ladders, letters, litters, maple sugar cones, mats, medicine, moose and muskrat callers, pack baskets, pails for water and berries, paint containers, paper, porcupine quill work foundations, porringers, pouches, powder flasks, quivers, rattles, sails, seed testers, sap containers, sewing and embroidery patterns, shields, smoke-raci covers, splints for broken bones, storage containers, torches, wigwam coverings, winding sheets, wrappers, and many other less important ways.

The early influx of French and English trade goods into the area brought about a diminution in the importance of birch bark, but it has never been entirely forced out of use. This retention of old materials, sometimes in new forms, was not due solely to the reluctance of the Indians to forsake the traditional. They were quick enough to give up the bow and arrow, stone knives and axes, and pottery vessels when metal weapons, tools and utensils were demonstrably superior.

It was qualities inherent in birch bark that made it an ideal medium for utilitarian and art objects in many shapes and sizes. Birch bark burns easily as kindling, firewood, or torch; yet it also resists burning, and a kettle of birch bark filled with water can be used to cook over a low fire. It can be cut into heavy slabs as thick and rigid as a heavy board, or separated into sheets as thin as tissue, and as soft and flexible as leather. It is very durable, and enough for the Indians' needs was almost always close at hand.

If the bark from the birch is removed in the proper season—in spring or summer if a thin sheet is wanted, or in winter for heavy bark for canoes, wigwam coverings or decoration—and the growing or cambium layer is uninjured, the tree will live, new bark will eventually cover the scar, and the tree can be peeled again.

If large sheets of heavy bark were needed, when the desired tree was found, it was girdled as high as could be reached, and again down below as far as the bark was good. A slit was then made from the upper girdle to the lower, and the bark easily loosened and peeled off in one piece. This sheet of bark was then rolled. Such rolls often weighed as much as forty pounds, and were carried out of the woods on the backs of the Indians. They were used while still green, if possible.

The Indian women were expert workers in birch bark. An Indian family always sought a good hunter as a husband for their marriageable daughter; but she, on the other hand, was expected to be educated to make Indian bags, birch dishes, to lace snow shoes, make Indian shoes, string wampum belts, sew birch canoes, and boil the kettle. If she could fulfil these requirements she was "esteemed a lady of fine accomplishments."

Whenever it was available, the Indians apparently utilized sheets or mats of birch bark as a covering over the framework of their houses. It was most frequently mentioned for Northern New England, but it was also used in other places. Roger Williams wrote of the Indians of southern New England, "Wuchickapeuek: Burching barke which they dress finely, and make a Summer covering for their houses." He also noted that usually for their door they had "a hanging Mat, which being left up falls down of itself," but that even as early as 1643 many of them were getting "English boards and nailes" to "make artificial doores and bolts themselves," and others made "slighter doores of Burch or Chestnut barke."

Nicholas Denys, who lived at Cape Breton and in New Brunswick from 1632 to 1650, described the aboriginal way of building the typical birch bark

covered dome-shaped wigwam, including the cutting and preparation of the bark with stone and bone tools, and the duties of the women in the family. He also said that it was the size of the family which determined whether the wigwam was of the round or long house type.

The conical bark covered wigwam was a hunting, travel or emergency shelter, the building of which was early described by Dierville; who said it was made of "15 or 18 poles, more or less according to size, all set up in a circle, two feet apart." The poles, "a fathom or a fathom and a half in height" were "joined in a point and fastened together." This framework was "covered with branches of Fir, and large pieces of bark from the same tree or from Birch, and sometimes skins." A hole was "left at the bottom" that was "only large enough to go in and out of on all fours." Inside the wigwam a pole stretched across "at a height of four or five feet, and on it the Kettle" was "hung over a fire," which was "kept low and built in the center of the rear part of the wigwam."

Heavy winter birch bark frequently covered the outside of the wigwam like huge overlapping shingles. Inside the wigwam, thin sheets of birch bark made decorative hangings that helped to keep in the heat and shut out the cold. Chadwick mentioned the use of birch bark linings or hangings for large spruce bark covered wigwams at Oldtown in 1764.

Birch bark dishes were used primarily to hold food for eating. They early attracted the settlers by their great usefulness and the ease with which they could be made. Governor John Winthrop of Connecticut, in 1660, sent "A small Indian dish or porringer of the barke of birch or such like tree" to Henry Oldenburg, as a curiosity to be placed in the "repository" of the Royal Society.

John Josselyn, who spent many years among the Indians of southern Maine, was much impressed with the beauty of these birch bark dishes. He wrote, "Delicate sweet dishes too they make of Birch-Bark, sewed with threads drawn from Spruse or white Cedar-roots, and garnished on the outside with flourisht works, and on the brims with glistering quills taken from the porcupine, and dyed, some black, others red; . . . white are natural, these they make of all sizes from a dram cup to a dish containing a pottle," (⅛ oz. to 4 pints).

Winthrop also sent the Royal Society "a small paine" of bark and other Indian articles "put in only to shew the manner" of the making of their "family implements." "Their pails to fetch water in," according to Gookin, were "made of birche barke, artificially doubled up" so that they had "four corners, and a handle in the midst." Some of those which they made "in an hour's time" would "hold two or three gallons." Josselyn also mentioned the making of "Buckets to carry water or the like." The "like" may sometimes have been maple sap which they collected in the spring. Little cones of bark were made to hold small amounts of maple sugar. At Passadumkeag, Chadwick found "in Sundre Wiegwoms . . . 3 or 400 wat" of maple sugar which the Indians told him was "only a Stock of one year for there famelys."

Baskets and boxes of birch bark were used for gathering fruits and berries and for the storage of clothing and other articles, as well as for carrying possessions from one place to another. Gookin said, "they make several sorts of baskets, great and small. Some will hold four bushels, or more: and so downward to a pint. In their baskets they put their provisions."

In northern New England household utensils were made almost exclusively of birch bark at the time of European contact. Birch bark is an ideal medium for storing and carrying food and water, for it imparts no taste to whatever it contains, is waterproof, easy to transport, and durable.

Not only did the Indians carry and store food in and eat from birch bark containers, but they boiled food in them over a slow fire as mentioned before. There are also numerous references to "stone boiling" in birch bark containers; a process by which food was cooked by heating stones, picking them up with green sticks, and dropping them into the food in the container. John Gyles' account tells the story in one sentence. He said, "If they have lost or left their kettle, it is but putting their victuals into a birch dish, leaving a vacancy in the middle, filling it with hot water, and putting in hot stones alternately; they will thus thoroughly boil the toughest neck of beef." Gyles was writing in the latter part of the 17th century when metal kettles had come into use for much of the cooking, but he maintained that the Indians remembered how to take care of the situation in the old way.

Seaworthy birch bark covered canoes were light in weight, yet sturdily built masterpieces of design and construction. They were indispensable alike to travelling Indians, Colonists, and fur traders

for water transportation along the shores or on inland streams, where many portages were necessary.

The Indians used the birch bark canoe in shallow and in white water. They used it for hunting and fishing, and even for whaling in the open sea. It was easily propelled by those skilled in its use, and they could travel with the swiftness of an arrow.

Though birch bark canoes were fragile looking, they could stand much hard usage. The larger ones held ten or twelve persons, or "three or four men and a considerable freight." The fact that they were portable made it possible to save considerable time. Often, "to shorten their voyage" when heavier boats would have had "to double a Cape," the Indians would "put to shore, and two of them taking up the Canow, carry it across the Cape or neck of land to the other side," where they would put it in the sea again. They also had regular portages or carries between lakes or rivers, and around waterfalls.

Josselyn describes the canoes as being shaped with "flat Ribbs of white Cedar," covered with "large sheets of birch bark," sewed "through with Spruce Roots or White Cedar," and pitched "with a mixture of Turpentine and hard rosen" that was "dryed upon the air on the outside of the bark of Firre-trees." Nicholas Denys, and others, add more detail.

Torches or flares were made by putting pieces of birch bark in a cleft stick, or lighting a small roll of birch bark. They were used much as we would use a flashlight, and for supplementary lighting in the wigwams; but the chief use was for "jack-lighting" or night fishing in the taking of sturgeon, salmon and other fish. Sturgeon were much desired for food, but they were large fish, vulnerable only on the underside, where their bodies were not covered by heavy, almost impenetrable bony plates. The Indians "lighting a blazing torch of Burtchen rindes" waved it over the side of the canoe and "the Sturgeon much delighted with, comes to them tumbling and playing, turning up his white belly." The Indian then would throw a harpoon attached to "a forty fathom line" into the sturgeon who, after a few frantic attempts to escape, was soon worn down and captured.

Many of the early writers noted with surprise that utilitarian objects that the Indians made of birch bark were often highly decorated. Gookin said that many of the baskets of the Indians were "very neat and artificial, with portraitures of birds, beasts, fishes and flowers, upon them in colours." Josselyn mentioned birch bark containers "garnished on the outside with flourisht works, and on the brims with glistering" dyed and natural porcupine quills. Many specimens decorated with porcupine quill and moosehair embroidery have been preserved.

Birch bark is a material that allows almost unlimited opportunity for variety in artistic expression. The designs found on it are distinctive and totally unlike the designs preserved on the potsherds found throughout the area. The specimens that have come down to us are decorated both with freehand realistic inscribed designs and complex, inscribed, incised, or cut out geometrical patterns. There are also examples of bitten patterns in the bark.

Tribal styles sometimes can be recognized, and Indian informants often say of old specimens "that is Micmac," "A Passamaquoddy must have made that" or "that came from Oldtown." Investigation of the source of the specimen generally indicates that they were correct in their surmises.

Another very important use of birch bark was in the form of writing paper. In 1887 and 1888 Garrick Mallery of the Bureau of Ethnology obtained an exceedingly valuable collection of birch bark pictographs from the Passamaquoddy and Penobscot Indians. Through this collection, and studies made at this time, Mallery was able to prove "a similarity in the use of picture-writing between the members of the widespread Algonquin stock in the regions west of the great lakes and those on the eastern seaboard." The collection includes specimens of birch bark on which are recorded tribal emblems, illustrations for stories, messages, and traders' shop accounts.

Fig. 1 is the Passamaquoddy tribal emblem. Two Indians in a canoe, both with paddles, following a fish, the pollock.

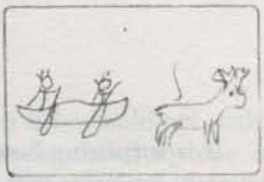

Fig. 2 is the Micmac emblem. Two Indians in a canoe, built high in the middle parts, "humpback," following a deer.

Fig. 3 is the Penobscot emblem. Two Indians in a canoe, one with a paddle, the other with a pole, following an otter.

Fig. 4 is a Passamaquoddy drawing, showing a war chief with 300 braves. The large size of the leading figure indicates his rank.

Fig. 5 is an illustration for the story of the Weasel girls who come down from Star-land by means of a diminishing hemlock tree, as they flee from Lox. The girl is flattering the vain crane to get him to ferry them across the river.

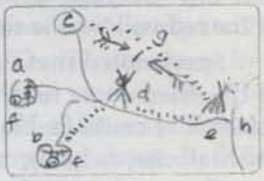

Fig. 6 is a wikhegan (Pass.) message left behind by an old Penobscot Indian, Nicholas Francis, for his nephew, Noel Lyon in 1885. It shows that the two started off to trap beaver and made their camp at (d) near Moosehead Lake (h) having a supply tent at (e). They set traps for beaver at (f f) in the ponds (a) and (b) not far from the beaver dams. Noel on his return from pond (b) found the wikhegan saying his uncle had left for pond (c) to be gone 1 day, as shown by the arrows with the 1 between them at (g).

Fig. 7 is an amusing shop account of tall thin girl who sold a basket for 20c (xx) one dime of which was taken out to pay for a plug of tobacco which she had bought previously.

In a paper of this sort it is obviously impossible to go into detail about a subject that is so wide in scope.

It is obvious however, that the ease with which birch bark could be acquired, the efficiency with which it could be worked, the convenience of having a constant supply of free raw material to cover wigwams, make canoes, or take the place of china, metal, paper and cloth, led to its long continued use for many necessary articles. Even today the value of birch bark is recognized for quickly making camp or picnic utensils such as cups, dippers, dishes, berry boxes, torches and the like. Its art possibilities, too, are still appreciated, and the Passamaquoddy and Penobscot Indians are kept busy supplying the demands of the tourist trade.

It is safe to say that if a blight had carried off the white birch in Colonial times, as it did the chestnut tree three centuries later, the Indians would have felt that the angry hand of their God of Misfortune was raised against them, and by means of propitiation and magic undoubtedly would have sought to prevent such a disaster. The loss of the white birch would have been devastating to a hunting culture where quickly built shelters, and travel with speed and light equipment are essential. Not only would the material culture of the Indians have suffered impoverishment, but the loss of the birch would have had an equally destructive effect on their art and mythology.

SMOKING HABITS OF THE WABANAKI

By

NICHOLAS N. SMITH

It is surprising how little has been reported by the early explorers and colonists concerning the use of tobacco by the Indians of Maine and along the St. John River in New Brunswick, Canada. The use of tobacco by these Indians must have been one of the first customs observed by the intruding Europeans. After having voyaged to Turkey, and undoubtedly having tried the various Asian varieties, it would be extremely interesting to know what Capt. John Smith thought of the varied and fragrant plants smoked by these Indians.

The native tobacco most widely used now by the Penobscot, Passamaquoddy and Malecite is the red willow (cornus stolonifera), often called squaw bush by the Indians. In their language the natives refer to the tobacco as Tom-a-wey, but as Nes-bi-kamk^{w} when referring specifically to the plant. The latter word was translated by Peter L. Paul, a Malecite of the Woodstock Reserve at Woodstock, New Brunswick, as "place you choose to live." This suggests that the Indians would camp close to a growth of the red willow, the source of supply.

Speck noted that the Penobscot used the leaves of the dried sweet fern, which they called "Mohawk tobacco." I could find no confirmation of this among the Malecite, as being one of their own traits. Adney mentions a native Canadian tobacco (nicotiana rustica) in his voluminous notes on the Malecite. He obtained a supply from the Iroquois Reservation at Caughnawaga, Quebec, and planted it near his cabin in Woodstock, New Brunswick. Peter Paul took me there in 1953 to see if we could find some, but without result. This tobacco is very strong, and is still used by the Caughnawaga. Adney said that an Indian from Caughnawaga told him that "one puff was enough for five men."

Lescarbot observed that the Micmac cultivated the nicotiana rustica, and Strachey noted that this type of tobacco was grown in New England as far north as the Kennebec River. I could find no references to this plant being used by the inhabitants of the area between these two groups, although it seems logical that they should be familiar with it. Gyles does not mention tobacco in the account of his captivity from 1689 to 1699.

The most popular native type of tobacco now used by the Wabanaki is the bark of the red willow, dried and smoked. I have personally sampled it, mixed with commercial tobaccos, and find it a pleasant blend. Penobscot and Malecite can remember when beaver castor was added to the bark to make it stronger, but no one to my knowledge uses it now. The popularity of the red willow over a wide area has been reported. Howley stated that the Beothuck used a willow, cornus stolonifer, which he may have mistaken for cornus striacta, and Parkman reported it among the Ogillallah in "The Oregon Trail."

The earliest account that I have been able to find of the use of tobacco by the Wabanaki was given by Rosier, in 1605: "The Indians gave good welcome, spreading deer skins to sit upon as they passed the pipe. They smoked excellent tobacco, as good as any we ever took." The origin of tobacco in the culture of the Wabanaki is unknown, although there are several stories which have been told in their folklore as to its beginning, and several of the Kuloskap tales tell of its use. An original story that I like was told me by a Penobscot, Walter Ranco, a descendant of Joe Polis, Thoreau's guide— In the old time there was a woman who lived among the Penobscot who was very good. Everybody liked her, and she did a great deal of good among the people. If she were alive today, she would be called a saint. She lived to be very old, probably a reward for helping her people. One day she died. The whole village mourned for her and was very sad. When they buried her, they said that they would come back to the grave in a few days. The people went back and found a fragrant bush that had sprung up from the sacred spot. They did not see how such a plant could have grown from the grave unless it had been put there for a purpose so they decided to burn it as an offering and memorial to their departed one, whom they had loved so much. When they burned the plant, they found that it was very fragrant and pleasant. This was the first tobacco and the altar furnished the first pipe.

A second version is briefly related by Speck, and I also recorded it in 1952 from one of the oldest Penobscots then living. As Speck's account is sketchy, and as I believe it of interest to see the detail given in a story as late as 1952, I will record it here — In the old time the tribe was starving to death. The time was terrible; there were no animals and even the edible plants were difficult to find. It seemed that the whole tribe would eventually starve to death. A young chief had just married an extremely attractive young princess who had long yellow hair. She told her husband to kill her and

drag her body back and forth across a clearing. He did not want to do this but she was very insistent for the safety of the village so he complied with the request. The whole tribe gathered for the death ceremony. The sad chief killed his wife, and then dragged her body back and forth across the clearing, while all the people chanted in mourning. It was a very sad occasion. A few days later the people saw the unidentifiable plants growing from the clearing. One grew very tall with a thick stalk, and with yellow tassels growing between the long slender leaves and the stalk. This was corn, which came from the body of the princess; her bones became the other plant, tobacco.

A third version, which I shall quote from Speck, but did not find mentioned during my field trips follows — "A more authentic version, however, credits Gluskabe with stealing the first tobacco from a monster grasshopper, who lived upon an island, and bestowing it to the people."

These first two tales relate the extremely good qualities found in two women. From the magical way in which they believed that tobacco originated, one might expect that they used it as part of their religio-magical ceremonies; and undoubtedly they did, although any record has now been lost. The Naskapi presently use tobacco in their ceremonies, but this was not the case before the advent of Europeans. Possibly Penobscots entered that area during the French and Indian Wars, and helped to introduce this custom and the accompanying rites into the Naskapi ceremonies.

Numerous museums display stone pipes, many with exquisitely carved designs, and every archaeologist has a desire to find such a piece. However, I do not believe that these were for ordinary use, but were reserved for ceremonial occasions. The stone pipe was made by first carving out the general shape, and then hollowing out the bowl. A small bow was used with a drill on a shaft. Sand and water were put on the stone to be hollowed and the bow was worked back and forth, the drill having the aid of the grit to help in the process. Finally, the elaborate carving was added.

The first stone pipes were probably tubular. Willoughby pictures three that were charred, indicating their use with tobacco. These were found in the territory of the Penobscot. A similar type, employed by the Penobscot, Micmac and Naskapi was made from a roll of birch bark. It seems logical for the Malecite to have used them, but I have found no definite information to verify this assumption. Quoting Thoreau: ". . . my companion having lost his pipe, asked the Indian if he could not make him one . . . and in a minute he rolled up one of birch bark, telling him to wet the bowl from time to time." The modern Micmacs, according to Dawson in his "Geology of Nova Scotia, New Brunswick and Prince Edward Island," sometimes extemporized a tobacco pipe from a twisted cone of birch bark—Dawson suggests that if this habit existed among their ancestors, it would account for the comparative paucity of stone pipes in that area.

The last stone craftsman among the Malecite was Dr. Peter Polchies. Many of his fancy pipe bowls are in museums. He used files to create his magnificent carvings rather than the former primitive instruments. Rosier noted a type of pipe fashioned from the "short claws of a lobster, which will hold ten of our pipes full." I do not believe that a pipe of that size would have been used to smoke the strong Nicotiana rustica.

Pipe bowls were also carved from wood. I have a pipe, made from two pieces of wood, that was given to me by a Malecite. Both the bowl and the stem were of the same kind of wood. It is reputedly over a hundred years old. The bowls were frequently fashioned from chestnut and cedar. The stems were of split squaw bush, alder, an unknown variety of willow, or of other pithy plants. In 1954 I met an old conservative Penobscot who was living alone in the woods of Springfield, Maine, who showed me a pipe that he was smoking. The bowl was a cheap store variety, but he had fashioned the stem from a wood that he called "trout wood." It appeared to be of the same willow mentioned by Speck; but I could not definitely identify it as such, and have been unable to do so from further questioning at various reservations. I thought it interesting that the old Penobscot added proudly, "No cancer from it."

An easy method of making a tobacco pouch was described to Thoreau by a Penobscot, identified only as Sebattis: ". . . He observed that they made tobacco pouches of the skins of their moose ears, sewing the two together inside to inside."

At the present time all smoking is done for pleasure, although formerly it accompanied ceremonies. Perhaps the stronger varieties were used for the religious-magical rites. It was also used as a symbol of friendship in the peace pipe. Apparently the act of putting one's mouth on the spot where another's had been represented friendship. Today no one can enumerate all the varieties of tobacco formerly used by the Wabanaki.

PATACKOSI*

A limpid Plymouth lake long called a sea
One sultry summer day attracted me,
Along its windward northern shore I strayed,
In search of some relief and cooling shade,
To where within a pleasant little nook
A rustic bridge gives passage o'er the brook.
I sank in sweet abandon on the seat
And found a welcome surcease of the heat;
And as I sat I mused upon the flow
Of water passing ceaselessly below,
Upon its winding and historic way
To Plymouth harbor and beyond, the bay.
How long since melting glaciers bared the earth
And gave this merry little stream its birth?
I would that I be given now my choice
To have the power to understand its voice.
What wond'rous tales would I be sure to hear?
What clouded mysteries would then be clear?
Did ancient Norsemen while exploring south
Skirt Plymouth harbor and espy your mouth?
It really would be wonderful to know
If Thorwald filled his barrel from your flow.
Did hostile Indians then make his men
Seek safety on the open sea again?
These questions evermore will puzzle me
Unless the little brook should grant my plea.
The years rolled on, then came a Pilgrim band,
Who sought the freedom of a virgin land.
Against great odds their courage never failed,
And none went back that on the Mayflower sailed.
They built their homes along your northern shore,
And what they wrought shall live forevermore.

ADRIAN P. WHITING

*For the benefit of those who may not be familiar with the history and topography of Plymouth I will give you a brief description of those parts which are alluded to in my poem.

In 1621 Francis Billington roamed into the Plymouth woods and became lost. He climbed a tree and saw what he supposed was an arm of the sea. Later it was found to be a lake, and as a consequence was named Billington Sea. A brook flows from this lake down through Plymouth to the harbor. It is called "Town Brook" but it would be more fitting to use the Indian name—*Patackosi.*

There is a legend that the Norsemen once visited Plymouth and in a battle with the Indians their leader Thorwald was killed and buried on Saquish Head. Professor Baker supported this belief in the Tercentenary Pageant produced in Plymouth in 1921. The opening scene showed the landing of the Norsemen, the battle with the Indians, and the death of Thorwald.

HERE AND THERE

A Familiar Ring—

"The scarcity of workmen had caused them to raise their wages to an excessive rate, so as a carpenter would have three shillings the day, a laborer two shillings and sixpence, etc.; and accordingly those who had commodities to sell advanced their prices sometimes double to that they cost in England, so as it grew to a general complaint, which the court, taking knowledge of, as also of some further evils, which were springing out of the excessive rates of wages, they made an order, that carpenters, masons, etc., should take but two shillings the day, and laborers but eighteen pence, and that no commodity should be sold at above four pence in the shilling more than it cost for ready money in England; oil, wine, etc., and cheese, in regard of the hazard of bringing, etc., (excepted).

The evils which were springing, etc., were: 1. Many spent much time idly, etc., because they could get as much in four days as would keep them a week. 2. They spent much in tobacco and strong waters, etc., which was a great waste to the commonwealth, which, by reason of so many foreign commodities expended, could not have subsisted to this time, but that it was supplied by the cattle and corn, which were sold to newcomers at very dear rates—corn at six shillings the bushel, a cow at twenty pounds — yea, some at twenty-four, some twenty-six pounds — a mare at thirty-five pounds, an ewe goat at 3 or 4 pounds; and yet many cattle were every year brought out of England and some from Virginia. Soon after order was taken for prices of commodities, viz., not to exceed the rate of four pence in the shilling above the price in England, except cheese and liquirs, etc."

—*Winthrop's Journal*—1633.

Damariscotta Dates—

Mya shells from the extensive Damariscotta shellheaps of Maine have recently been dated at approximately the beginning of the Christian era. W. H. Bradley of the U. S. Geological Survey, writing in the January AMERICAN ANTIQUITY describes the removal of shells in 1955 for Carbon-14 analysis. Samples were chosen from two areas — six feet below the highest point, and six feet above the mean high tide level. The higher level shells tested out at 1610 ± 160 years, and those from the lower level at 1710 ± 160 years. Mya shells were selected for the test rather than the more common oyster shells as they were less effected by weathering, and thus gave a truer indication of correct age. The ages were computed on the basis of shell activity equivalent to modern wood; they were not corrected to C^{13} activity.

Due to the fact that close dates came from both the upper and the considerably lower samples, Mr. Bradley suggests that that part of the Glidden Heap close to the river was built up rather rapidly —within one to a few hundred years.

Site Preservation—

Quoting Waldo R. Wedel, in the *Kansas Historical Quarterly*— "The collecting of Indian arrowheads and other relics as a hobby is attracting a steadily widening circle of devotees. Insofar as this reflects an increasing interest in the serious study of human prehistory it is an encouraging sign, since few other sciences present a greater opportunity for profitable cooperation between the specialist and the intelligent hobbyist.

Unfortunately, where such collecting involves digging, it becomes a grave problem if the excavator lacks the requisite technical knowledge. For the enthusiastic but untrained amateur who looks beyond the artifact for the story it may tell there is hope, since with intelligent guidance he may be able eventually to make a very material contribution to scientific research.

Too many persons, however, collect only in the hope of securing specimens finer than those found by their neighbors and competitors, or of such nature as to be offered for sale on the market. It should be remembered that the number of archaeological sites is very definitely limited, and their excavation by such individuals leads quickly to the ultimate destruction of the very materials with which the prehistorian must work. Simple as the methods and techniques of archaeology may appear to be they are nevertheless fundamental, and unless they are conscientiously observed irreparable loss of data will ensue.

A specimen torn from its context without a record is like a single word or phrase taken from the written page; neither has meaning unless we know exactly where it belongs or with what it was originally associated. Similarly, a site dug out with no records is like a page taken out of a history book and destroyed; it can never be replaced. For this reason it cannot be too strongly urged upon the amateur that archaeological excavations should be undertaken only under the guidance or with the advice of a trained and experienced archaeologist."

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